

Listing and Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Presently presented) A fault-tolerant router, comprising:

a first router matrix card, said first router matrix card receiving N parity encoded input digital audio data streams and generating, from said N parity encoded input digital audio data streams, a first set of M parity encoded output digital audio streams, wherein M and N are integers and M is different from N;

a second router matrix card, said second router matrix card receiving said N parity encoded input digital audio data streams and generating, from said N parity encoded input digital audio data streams, a second set of M parity encoded digital audio streams;

an output card coupled to said first router matrix card and said second router matrix card, said output card receiving said first set of M parity encoded output digital audio streams from said first router matrix card and said second set of said M parity encoded output digital audio streams from said second router matrix card, providing, as an output therefrom, a selected one of said first and second sets of M parity encoded output digital audio streams, and switching from said selected one of said first and second sets of M parity encoded output digital audio data streams to an unselected one of said first and second sets of M parity encoded output digital audio data streams based upon detecting a parity error in said selected one of said first and second sets of M parity encoded output digital audio data streams regardless of whether a parity error is present in said unselected one of said first and second sets of M parity encoded output digital audio data streams.

2. (Previously Presented) The apparatus of claim 1, wherein said output card further comprises a switching circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card and said second set of M parity encoded output digital audio data streams from said second router matrix card, said switching circuit switching from said selected one of said first and second sets of M parity encoded output digital audio data

streams to said unselected one of said first and second sets of M parity encoded output digital audio data streams in response to assertion of a switching signal.

3. (Previously Presented) The apparatus of claim 2, wherein said output card further comprises:

a first parity check circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card;

a second parity check circuit coupled to receive said second set of M parity encoded output digital audio data streams from said second router matrix card; and

a logic circuit coupled to receive a first parity error signal from said first parity check circuit and a second parity check error signal from said second parity check circuit, said logic circuit determining, based upon said first parity error signal received from said first parity check circuit and said second parity error signal received from said second parity check circuit, whether to assert said switching signal.

4. (Previously Presented) The apparatus of claim 3, wherein said output card further comprises

a first delay circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card; and

a second delay circuit coupled to receive said second set of M parity encoded output digital audio data streams from said second router matrix card;

said switching circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card and said second set of M parity encoded output digital audio data streams from said second router matrix card via said first delay circuit and said second delay circuit, respectively.

5. (Previously presented) The apparatus of claim 3, wherein said logic circuit asserts said switching signal based upon detection of said parity error in said selected one of said first and second sets of M parity encoded output digital audio data streams.

6. (Cancelled)

7. (Previously Presented) The apparatus of claim 3, wherein said switching circuit switches back from said unselected one of said first and second sets of M parity encoded output digital audio data streams to said selected one of said first and second sets of M parity encoded output digital audio data streams based upon assertion of said switching signal.

8. (Previously Presented) The apparatus of claim 7, wherein said logic circuit asserts said switching signal based upon detection of a parity error in said unselected one of said first and second sets of M parity encoded output digital audio data streams.

9. (Previously Presented) The apparatus of claim 7, wherein said logic circuit asserts said switching signal based upon detection of a parity error in said unselected one of said first and second sets of M parity encoded output digital audio data streams only if no parity error is present in said selected one of said first and second sets of M parity encoded output digital audio streams.

10. (Previously Presented) The apparatus of claim 7, wherein said logic circuit asserts said switching signal based upon detection of a parity error in said unselected one of said first and second sets of M parity encoded output digital audio data streams regardless of whether a parity error is present in said selected one of said first and second sets of M parity encoded output digital audio data streams.

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17. (Previously Presented) The apparatus of claim 1, wherein said output card is further configured to continue providing as the output therefrom the unselected one of said first and second sets of M parity encoded output digital audio streams, even if no further parity error is detected in said selected one of said first and second sets, unless a parity error is detected in said unselected one of said first and second sets.

18. (Previously presented) A fault-tolerant router, comprising:

a first router matrix card, said first router matrix card receiving N parity encoded input digital data streams and generating, from said N parity encoded input digital data streams, a first set of M parity encoded output digital streams, wherein M and N are integers and M is different from N;

a second router matrix card, said second router matrix card receiving said N parity encoded input digital data streams and generating, from said N parity encoded input digital data streams, a second set of M parity encoded digital streams;

an output card coupled to said first router matrix card and said second router matrix card, said output card receiving said first set of M parity encoded output digital streams from said first router matrix card and said second set of said M parity encoded output digital streams from said second router matrix card, providing, as an output therefrom, a selected one of said first and second sets of M parity encoded output digital streams, and switching from said selected one of said first and second sets of M parity encoded output digital data streams to an unselected one of said first and second sets of M parity encoded output digital data streams based upon detecting a parity error in said selected one of said first and second sets of M parity encoded output digital data streams regardless of whether a parity error is present in said unselected one of said first and second sets of M parity encoded output digital audio data streams.

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20. (Previously Presented) A fault-tolerant router, comprising:

a first router matrix card, said first router matrix card receiving N parity encoded input digital audio data streams and generating, from said N parity encoded input digital audio data streams, a first set of M parity encoded output digital audio streams;

a second router matrix card, said second router matrix card receiving said N parity encoded input digital audio data streams and generating, from said N parity encoded input digital audio data streams, a second set of M parity encoded digital audio streams; and

an output card coupled to said first router matrix card and said second router matrix card, said output card receiving said first set of M parity encoded output digital audio streams from said first router matrix card and said second set of said M parity encoded output digital audio streams from said second router matrix card, providing, as an output therefrom, a selected one of

said first and second sets of M parity encoded output digital audio streams, and switching from said selected one of said first and second sets of M parity encoded output digital audio data streams to an unselected one of said first and second sets of M parity encoded output digital audio data streams based upon detecting a parity error in said selected one of said first and second sets of M parity encoded output digital audio data streams,

wherein said output card further comprises:

a switching circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card and said second set of M parity encoded output digital audio data streams from said second router matrix card, said switching circuit switching from said selected one of said first and second sets of M parity encoded output digital audio data streams to said unselected one of said first and second sets of M parity encoded output digital audio data streams in response to assertion of a switching signal;

a first parity check circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card;

a second parity check circuit coupled to receive said second set of M parity encoded output digital audio data streams from said second router matrix card; and

a logic circuit coupled to receive a first parity error signal from said first parity check circuit and a second parity check error signal from said second parity check circuit, said logic circuit determining, based upon said first parity error signal received from said first parity check circuit and said second parity error signal received from said second parity check circuit, whether to assert said switching signal, and

wherein said logic circuit asserts said switching signal based upon detection of said parity error in said selected one of said first and second sets of M parity encoded output digital audio data streams regardless of whether a parity error is present in said unselected one of said first and second sets of M parity encoded output digital audio data streams.

21. (Previously Presented) A fault-tolerant router, comprising:

a first router matrix card, said first router matrix card receiving N parity encoded input digital audio data streams and generating, from said N parity encoded input digital audio data streams, a first set of M parity encoded output digital audio streams;

a second router matrix card, said second router matrix card receiving said N parity encoded input digital audio data streams and generating, from said N parity encoded input digital audio data streams, a second set of M parity encoded digital audio streams; and

an output card coupled to said first router matrix card and said second router matrix card, said output card receiving said first set of M parity encoded output digital audio streams from said first router matrix card and said second set of said M parity encoded output digital audio streams from said second router matrix card, providing, as an output therefrom, a selected one of said first and second sets of M parity encoded output digital audio streams, and switching from said selected one of said first and second sets of M parity encoded output digital audio data streams to an unselected one of said first and second sets of M parity encoded output digital audio data streams based upon detecting a parity error in said selected one of said first and second sets of M parity encoded output digital audio data streams,

wherein said output card further comprises:

a switching circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card and said second set of M parity encoded output digital audio data streams from said second router matrix card, said switching circuit switching from said selected one of said first and second sets of M parity encoded output digital audio data streams to said unselected one of said first and second sets of M parity encoded output digital audio data streams in response to assertion of a switching signal;

a first parity check circuit coupled to receive said first set of M parity encoded output digital audio data streams from said first router matrix card;

a second parity check circuit coupled to receive said second set of M parity encoded output digital audio data streams from said second router matrix card; and

a logic circuit coupled to receive a first parity error signal from said first parity check circuit and a second parity check error signal from said second parity check circuit, said logic circuit determining, based upon said first parity error signal received from said first parity check circuit and said second parity error signal received from said second parity check circuit, whether to assert said switching signal, and

wherein:

said switching circuit switches back from said unselected one of said first and second sets of M parity encoded output digital audio data streams to said selected one of said first and second

sets of M parity encoded output digital audio data streams based upon assertion of said switching signal, and

 said logic circuit asserts said switching signal based upon detection of a parity error in said unselected one of said first and second sets of M parity encoded output digital audio data streams regardless of whether a parity error is present in said selected one of said first and second sets of M parity encoded output digital audio data streams.